REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested. The subject Amendment is submitted in response to the office action mailed on November 14, 2003. Claims 1 and 6-18 have been amended. Thus, claims 1-18 remain pending in the application.

By way of this amendment, Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain any outstanding issues that require adverse action, it is respectfully requested that the Examiner telephone the undersigned at (858) 552-1311 so that such issues may be resolved as expeditiously as possible.

Information Disclosure Statements

Applicants have submitted two additional Information Disclosure Statements (IDS) in the subject application. The first was submitted on December 18, 2003 and the second was submitted on December 23, 2003. Applicants respectfully request the Examiner fully consider the references cited in the two additional IDSs.

Turning to the specific objections and rejections:

1. Objections to the Specification

The Examiner has objected to the Specification requesting corrections to inadvertent typographical errors. As such, Applicants have amended the Specification at page 1, line 33 to replace "performs" with --perform--; at page 6, line 12 to replace "year" with --rear--; at page 7, lines 27-32 to remove "in the" and add --a-- following reference numeral 122 in line 30; at page 8, line 11 replacing reference numeral "120" with --112--; and at page 8, line 26 to insert reference numeral --210-- providing an accurate reference numeral for "computer."

The Examiner also requested that Applicants add two reference numerals, --210, 212-- at page 8, line 22 following "(system host)." Applicants respectfully submit

that the portion of the text cited by the Examiner is not describing or referring to the

"single board computers," but instead referring to "modifications of ... connections" of

the single board computers. (Specification, pg. 8, lines 22-23). The reference numerals

--210, 212-- do not apply to the "modification of connections." Therefore, Applicants

have not amended the Specification to include these reference numerals at page 8, line

22.

2. Objection to the Claims

The Examiner objected to claim 6 requesting that "A apparatus" be replaced

with "An apparatus." Applicants have amended claim 6 to recite "An apparatus."

The Examiner further objected to claims 6, 8-13 and 16-18 requesting that the

terms "another" and "other" be replaced as appropriate to provide clarification.

Applicants have made an effort to amend the claims to include reference to "first,"

"second," "third" and so forth where appropriate. Therefore, Applicants believe that all

of the Examiner's objections to the claims have been addressed and respectfully request

that these objections be withdrawn.

3. Claim Rejections under 35 U.S.C. §102

The Examiner has rejected claims 1-2 as anticipated by U.S. Patent No.

5,574,950 to Hathorn et al. (Hathorn) under 35 U.S.C. §102(b), and further rejected

claims 1-18 as anticipated by U.S. Patent No. 6,643,795 to Fu et al. (Fu) under 35 U.S.C.

§102(e). However, Applicants respectfully submit that the applied Hathorn and Fu

patents fail to teach each element of the amended claims.

More specifically with respect to Hathorn, amended claim 1 for example

recites in part:

> a first hybrid switching module including a first hybrid switching
> module processor data channel, a first hybrid switching module main data
> channel, a first input/output link data channel, a first switch, and a first bridge,
> the first hybrid switching module processor data channel being coupled to the
> first processor data channel ...

     a second hybrid switching module including a second hybrid
switching module processor data channel, a second input/output link data
channel, a second switch, and a second bridge, the second hybrid switching
module processor data channel being coupled to the second processor data
channel, the second input/output link data channel being coupled to the first
input/output link data channel;

     wherein the first hybrid switching module further comprises a
failure mode that couples the first input/output link data channel with the first
main bus when the first processor fails allowing the second processor to access
the first main bus, and the second hybrid switching module further comprises a
failure mode that couples the second input/output link data channel with the
second main bus when the second processor fails allowing the first processor to
access the second main bus.

As such, amended claim 1 provides in part for first and second hybrid switching

modules, each comprising first and second switch, respectively, and first and second

bridge, respectively. Further, the first and second hybrid switching modules of

amended claim 1 include failure modes. The amendments to claim 1 are fully

supported throughout the application, for example, at page 10, line 34 through page 11,

line 5, the specification in describing FIG. 4 recites "[t]he data flow is controlled by

software depending on the mode of operation. In the case of CPU failure, for example,

a failover operation will take place, the next available CPU will take over and be

coupled to the PCI backplane busses through the hybrid switching modules."

Therefore, the application as filed provides support for the amendments to claim 1, as

well as the amendments to the other amended claims.

   The Hathorn reference does not teach each element of amended claim 1. For

example, Hathorn does not teach a hybrid switching module. Alternatively, Hathorn

only describes a dynamic switch, known in the art to provide optical coupling. The

dynamic switch of Hathorn is not equivalent to the Hybrid switching module as

claimed.

   Further, the hybrid switching module of amended claim 1 further comprises,

for example, a switch and a bridge. The Hathorn reference fails to teach or suggest a

hybrid switching module that comprises a bride, or a switch. Hathorn only describes

switches. Therefore, the Hathorn reference fails to teach each element as recited in amended claim 1.

Still further, the first and second hybrid switching modules of amended claim 1 additionally comprise failure modes that couple the input/output link data channels with the main buses when the first or second processor fail, respectively, allowing the alternative second or first processor, respectively, to access the alternative main bus. Hathorn fails to teach or suggest a hybrid switching module with a failure mode, or a failure mode that couples alternative processors to a main bus, such as a main peripheral component interconnect (PCI) bus. It would not have been obvious in view of the Hathorn patent to provide hybrid switching modules with failure modes. The Hathorn patent is specifically directed to remote data shadowing in case an entire system fails (e.g., system 260 or 360). The Hathorn patent is specifically directed toward copying data of a system in case "a disaster occurs destroying the entire system ...." (Hathorn, col. 2, lines 20-21). There is no suggestion that the system of the Hathorn patent provide for a failure mode in the event a processor should fail. Therefore, the Hathorn patent fails to teach or make obvious the invention as recited in amended claim 1, and thus claim 1 is in a condition for allowance.

Claim 2 depends from claim 1. Therefore, Hathorn also fails to teach each element of claim 2 for at least the reasons provided above with respect to claim 1.

The Examiner has further rejected claims 1-18 over the Fu reference. However, the Fu reference also fails to teach or suggest at least a hybrid switching module that comprises a failure mode. There is no suggestion in the Fu reference to provide a hybrid switching module that comprises a failure mode that couples a second processor with the first main bus when a first processor fails. There is no discussion of failure of a processor or providing a hybrid switching module with a failure mode that provides coupling of an alternative processor to a bus in the even of a processor failure.

Further, the Fu reference fails to suggest a hybrid switching module having a crossbar switch and arbiter, and a bridge. Alternatively, the Fu reference only shows a

switching matrix in the flow control unit (FCU) that communicates with external bridge chips. Still further, the Fu reference teaches away from an FCU including a bride. The Fu reference specifically provides for the bride chips to be external of the FCU. For example, the Fu reference describes shifting the data buffer external from the FCU to the bride control units (BBU) "in order to save space in the FCU...." (Fu et al., col. 5, lines 4-5). The FCU of the Fu reference is a complex device and the Fu reference specifically describes external bridge control units and teaches away from a hybrid switching module comprising a switch and a bridge. One skilled in the art would not incorporate a bridge into the FCU as this would go against the teachings of the FCU. Therefore, the Fu reference fails to teach each element of amended claim 1, and thus claim 1 is not anticipated or made obvious over the Fu reference.

Amended independent claim 6 is also not anticipated by the Fu reference. Similar to claim 1, amended claim 6 also recites, for example, a hybrid switching module that comprises "a first switch ... and a first bridge." As discussed above, the Fu reference fails to teaches, and further teaches away from a hybrid switching module comprising a switch and a bridge. Therefore, claim 6 is also not anticipated or made obvious in view of the Fu reference.

Amended independent claim 13 is also not anticipated by the Fu reference. More specifically, amended claim 13 recites in part, for example, "a hybrid switching module ... comprises a failure mode that couples the input/output link data channel with the first hybrid switching module bus data channel during a failure." As discussed above, the Fu reference fails to teach or suggest a hybrid switching module comprising a failure mode. There is no suggestion in the Fu reference for a hybrid switching module coupling an input/output link with a bus data channel during a failure. The Fu reference does not discuss the failure of a CPU. Therefore, it would not be obvious to provide a hybrid switching module with a failure mode, and thus amended claim 13 is not anticipated or obvious in view of the Fu reference.

Dependent claims 2-5, 7-12 and 14-18 are also not anticipated or obvious for

at least the reasons provided above for independent claims 1, 6 and 13, respectively.

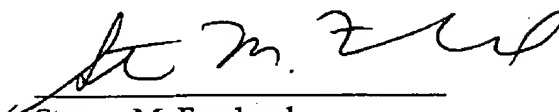Therefore, Applicants respectfully request that the rejections of claim 1-18 be

withdrawn.

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Amendment

CONCLUSION

Applicants submit that the above amendments and remarks place the

pending claims in a condition for allowance. Therefore, a Notice of Allowance is

respectfully requested.

Respectfully submitted,

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Date

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